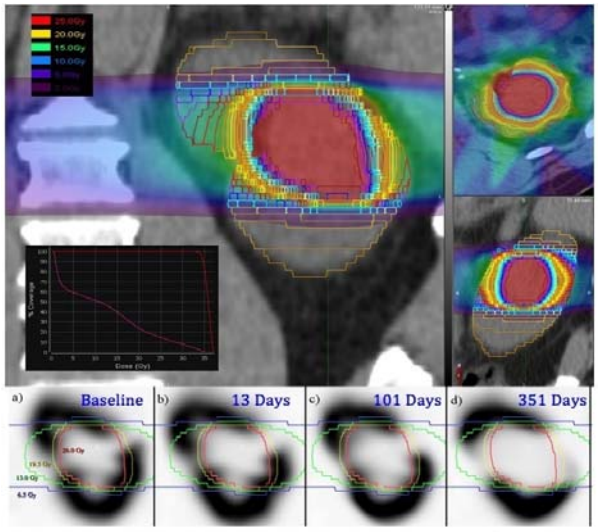

Figure 1 – Prescription of 26Gy/1, isodose lines depicted on dose colour wash *(above)* with regional loss in kidney function over time demonstrated *(below)*

Conclusions: SBRT for primary inoperable RCC appears highly tolerable in the short to medium term, without need for dialysis. No renal dysfunction is observed up to 90 days post-SBRT, however decline in global GFR is noted at 1-year. Renal dysfunction in the treated kidney was highly dose dependent and predictable using BED_{3Gy} estimates. Ongoing late assessment of renal function kinetics is warranted.

PO-0717

Radical cystectomy vs organ-sparing trimodality treatment in muscle-invasive bladder cancer: a systematic review

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Purpose/Objective: The objective of the current review is to compare 5-year overall survival (OS) rates from retrospective and prospective studies of radical cystectomy (RC) and trimodality treatment (TMT), i.e. concurrent delivery of chemotherapy and radiotherapy after a transurethral resection of bladder tumor (TURBT), involving a total of 10265 and 3131 patients, respectively.
Materials and Methods: In order to assess the best treatment approach for MIBC, a PubMed literature search was conducted using the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) literature selection process. All prospective and retrospective studies available in full text, involving more than 20 patients with non-metastatic muscle invasive bladder cancer (MIBC) stage T2-4a N0 M0, treated with RC or TMT, reporting 5-year overall survival (OS) rates were selected.
Results: The median 5-year OS rate resulted to be 57% in TMT group, as compared with 52% (p=0.04), 51% (p=0.02) and 53% (p=0-38) in the whole group receiving RC or the group treated with RC alone or RC+chemotherapy, respectively. Multivariate analysis confirmed TMT as a significant prognostic variable.
Conclusions: Compared with RC, TMT seems to be associated with better outcomes for patients with MIBC. The addition of chemotherapy may improve the RC outcome in some subgroup of patients with higher probability of micrometastases. Prospective randomized trials are warranted to verify these findings and better define the role of the organ-sparing and radical treatment strategy in the management of patients with MIBC.

PO-0718

Impact on quality of life of radio-hormone therapy for prostate cancer: a "pooled analisys"

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Purpose/Objective: Adjuvant hormone therapy (HT) combined with radiotherapy (RT) improves prognosis in patients with intermediate-high risk prostate cancer (PC). However, HT produces several and debilitating side effects. There is no clear evidence in literature on the impact of integrated RT-HT treatment on QoL and particularly on fatigue. Therefore, aim of this study was to analyse the impact on QoL of type and duration of HT in patients undergoing RT for PC.
Materials and Methods: Data from 5 clinical studies on RT in patients with PC were collected. The QoL was assessed before treatment and then after 2 and 5 years from RT according to the CLAS scale (CLAS1: quality of life; CLAS2: energy level; CLAS3: ability to perform daily activities). Average values of these parameters were calculated and compared based on HT (administered or not), type of HT (analogue vs anti-androgen), and HT duration (< 18 months vs ≥ 18 months).
Results: Data from 251 patients with 2 years follow-up and 91 patients with 5 years follow-up were evaluated. Statistical analysis results are shown in the table below.

	2 years						5 years					
	CLAS1	p =	CLAS2	p =	CLAS3	p =	CLAS1	p =	CLAS2	p =	CLAS3	p =
HT												
No	7,357	0,802	7,526	0,240	8,048	**0,029**	8,057	0,144	7,614	0,265	8,000	0,454
Yes	7,257		7,007		7,219		7,159		6,894		7,356	
HT type												
LH-RH Analogue	7,334	0,505	6,915	0,443	7,178	0,759	7,165	0,972	7,078	0,322	7,333	0,901
Antiandrogen	7,163		7,118		7,269		7,153		6,689		7,383	
HTduration												
< 18 months	7,240	0,967	6,992	0,992	7,230	0,874	6,977	0,454	6,751	0,595	7,460	0,589
≥ 18 months	7,250		6,995		7,183		7,270		6,973		7,249	

Conclusions: Based on assessment of QoL in patients undergoing adjuvant RT +/- HT for PC, a significant reduction of the ability to perform daily activities was observed in patients treated with hormone therapy 2 years after RT. The lack of significant differences between CLAS values 5 years

after RT, is probably due to the smaller sample size. No significant differences according to type and duration of HT were observed. Newer strategies to reduce the negative impact on QoL of HT and further analysis based on PC-specific assessment tools appear to be justified.

PO-0719

Excellent 5 year outcome with image guided moderate hypofractionation in prostate cancer : phase I-II study results

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Purpose/Objective: To report 5-year clinical outcomes and late toxicity in prostate cancer patients (pts) treated with Image Guided Radiotherapy (IGRT) Moderate Hypofractionated Simultaneous integrated boost (SIB) by Tomotherapy in a Phase I-II study.

Materials and Methods: 211 pts (78 low- risk[LR], 53 intermediate- risk [IR] and 80high-risk[HiR]) were treated between 2005 and 2011. IR and HiR pts received 51,8 Gy on pelvic lymph-nodes (LN) and concomitant SIB to prostate up to 74,2Gy in 28 fr; LR pts were treated to the prostate to 71,4Gy in 28fr. Androgen deprivation (AD) was delivered to 33%,43% and 88% of LR/IR/HiR pts for a median time of 6, 12 and 34 months (m) respectively. The gastrointestinal (GI) and genitourinary (GU) late toxicities were recorded according to the RTOG scoring system. Biochemical relapse free (bRFS) survival (Phoenix definition), cancer-specific (CCS) and overall survival (OS) actuarial curves were assessed. Selected clinical/dosimetry variables were tested as potential predictors of GI /GU toxicity and of BCR/CCS/OS (Cox test) .

Results: Median follow was 60m. The 5-year incidence of late toxicity was: GU≥ 2 : 20.2 %; GU ≥G3 : 5.9% ; GI≥2 : 17%; GI≥3: 6,3%.The prevalence at the last control was: GU ≥G2: 7.1%, ≥G3: 1.9% ; GI ≥G2:5.2%, ≥G3: 1.9%. Best predictors of ≥G3 GU and GI late toxicity were GU acute toxicity≥G2 ([HR] :4.9) and previous surgery (HR:3.4) respectively. The overall 5-year bRFS was 93.7% (LR: 94.6%; IR: 96.2%; HiR: 91.1%); OS was 88.6% (LR:90.5%; IR: 87.4%; HR: 87%) and CSS was 97.5% (LR: 98.7%;IR:95%;HiR: 94.3%). AD and class risk were not correlated with bRFS/OS/CSS.

Conclusions: The combination of pelvic LN irradiation and high dose to the prostate (EQD2=88Gy) delivered with daily image-guided, intensity-modulated, moderate hypofractionation resulted in an excellent 5-year outcome, even in IR/HiR patients. The 5-year toxicity profile was acceptable with G3 incidences around 6%. The drastically reduced prevalence at the last follow-up for both ≥G2 and ≥G3 toxicities shows that symptoms were recovered in most patients.

PO-0720

Patient reported outcomes of overall bowel and urinary bother in the CHHiP trial (CRUK: 8262/A7257)

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Purpose/Objective: Patient reported outcomes (PRO) are important in the assessment of morbidity following treatment for prostate cancer, and may detect more late toxicity from radiotherapy than clinician reported outcomes. The CHHiP trial (Conventional or Hypofractionated High dose intensity modulated radiotherapy in Prostate cancer) randomised patients with early or intermediate risk localised prostate cancer to a standard arm of 74Gy/37f versus experimental arms of 60Gy/20f or 57Gy/19f and included a PRO substudy.

Materials and Methods: PROs of overall bowel bother (primary endpoint) and overall urinary bother (key secondary endpoint) were assessed as single items within UCLA-PCI and EPIC-50 quality of life instruments. These were completed at baseline, pre-radiotherapy (pre-RT), 10 weeks, 6, 12, 18 and 24 months post radiotherapy. All tests were conducted between the control group and each experimental arm. A significance level of 0.001 was used with 99% confidence intervals to allow for multiple testing. A difference in overall bowel or urinary bother score at 24 months was tested using the chi-squared test for trend. Kaplan-Meier methods were used to assess time to 'small' bother, with differences between arms assessed using the log-rank test. The odds of an increase in bother from pre-RT to 24 months were modelled using ordered logistic regression.

Results: 2011 patients consented to the PRO substudy. Return rates were 1659 patients (82.5%) pre-RT and 1444 (71.8%) at 24 months. 139 PRO pre-RT and 172 PRO at 24 months dated outside pre-determined acceptable time intervals were excluded from fixed timepoint analyses A temporary increase in any bother was seen at 10 weeks indicative of acute radiation toxicity (from 408/1498 (27.2%) pre-RT to 741/1308 (56.7%) at 10 weeks). Cross-sectional analysis at 24 months showed no difference between treatment arms (table 1).

Table 1: Overall bowel and urinary bother at 24 months

24 months post radiotherapy	74Gy/37f		60Gy/20f		57Gy/19f	
	n	%	n	%	n	%
Overall Bowel bother						
No problem	269	65.5%	266	63.8%	282	63.5%
Very small problem	92	22.4%	91	21.8%	93	20.9%
Small problem	26	6.3%	28	6.7%	38	8.6%
Moderate problem	19	4.6%	23	5.5%	21	4.7%
Big problem	4	1.0%	3	0.7%	3	0.7%
Not available	1	0.2%	6	1.4%	7	1.6%
74Gy/37f vs 60Gy/20f	Chi^2: p_{trend}=0.64					
74Gy/37f vs 57Gy/19f	Chi^2: p_{trend}=0.59					
Overall urinary bother						
No problem	262	63.7%	249	59.7%	283	63.7%
Very small problem	96	23.4%	104	24.9%	93	20.9%
Small problem	27	6.6%	35	8.4%	35	7.9%
Moderate problem	20	4.9%	17	4.1%	20	4.5%
Big problem	1	0.2%	5	1.2%	5	1.1%
Not available	5	1.2%	7	1.7%	8	1.8%
74Gy/37f vs 60Gy/20f	Chi^2: p_{trend}=0.31					
74Gy/37f vs 57Gy/19f	Chi^2: p_{trend}=0.72					

No differences were seen in time to small overall bowel bother (74Gy vs 60Gy: hazard ratio (HR) 1.11 99% CI: (0.85-1.46), p=0.32; 74Gy vs 57Gy: HR 0.97 (0.73-1.28), p=0.77) or small overall urinary bother (74Gy vs 60Gy: HR 0.99 (0.74-